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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/554,884	08/22/2000	Bertil Larsson	9847-0049-6X	9102

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EXAMINER	
MULLINS, BURTON S	
ART UNIT	**PAPER NUMBER**
2834	

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/554,884	LARSSON ET AL.	
	Examiner	Art Unit	
	Burton S. Mullins	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 April 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *20-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/21/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Suspension of Action

1. This action is a response to the request for reconsideration filed April 15, 2002. Pursuant to the Board of Appeal's final decision regarding U.S. Application No. 08/973,019, suspension has been lifted. As set forth in the decision on petition requesting suspension, the instant application was granted a suspension pending the decision on appeal of the '019 application. On November 27, 2002, the Board affirmed the rejection of the '019 application and on August 27, 2003, the Board denied applicant's request for reconsideration, thus terminating prosecution of the '019 application. An action on the merits follows.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 20-22 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Madsen (USP 3,932,779). Madsen discloses a turbo-generator including a plurality of thin pressure tubes 5 of a deformable material such as copper positioned in the slots 2 between the wedges 4 and the windings 3 (Fig.7). The pressure tubes are supplied with a hot pressure medium comprising a thermosetting resin 6 through feed tubes 8, the resin being supplied at a sufficient pressure and in a sufficient amount to produce an expansion of the space within the tube by at least 50 per cent (abstract). The feed tube is then subjected to heat in a localized area, thus accelerating the curing of the resin in this area of the tube and forming a plug, after which the supply of pressure to the pressure tube is disconnected. After the resin in the

pressure tube has hardened thus formed a "cold pressure medium" such that the tubes 5 solidify and permanently assume an expanded shape, the feed tube is removed (c.2, lines 1-5).

4. Claims 23-28 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Wood (UK 1,135,242). Wood discloses a rotating electrical machine comprised of a stator having slots with a flat side and undulated side, the slots provided with a resilient body (tube) in order to restrict movement of the conductors. Wood, as seen in the figures, teaches various arrangements of the packing means such that it would exert pressure either or both radially and/or tangentially against the conductors and the slot wall. The packing means may be made of an elastomeric material such as silicon rubber.

With regard to claims 25-26, note that Wood discloses having his elastic tube made of silicon rubber. Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select a material such as polyethylene or similar to that as claimed by applicant, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

With regard to claim 27, note figures 2-5 wherein the packing means are formed in various shapes in order to maintain uniform pressure on the conductors. Moreover, it would have been an obvious matter of design choice to have the tube shaped triangular or any particular shape, since such a modification would have involved a mere change in the size or shape of a component. A change in size or shape is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 29, 31-32, 34 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood (UK 1,135,242) and Elton (USP 4,853,565). Wood discloses the claimed invention except for having the stator winding strands comprised of semiconducting layers. Elton '565 discloses a cable with stranded conductors surrounded by a first inner semiconducting insulation layer 104, an intermediate solid insulation layer 106 and an outer semiconducting insulation layer 110 which is connected to ground. Such and arrangement, as disclosed by Elton helps to prevent corona discharge between the cable and the surrounding elements.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided in the machine of Wood winding having layers with semiconducting properties as disclosed by Elton, in order to prevent corona discharge from the winding.

7. Claim 30 is rejected under 35 U.S.C. j 103(a) as being unpatentable over Wood and Elton and further in view of Shildneck (US 3,014,139). Wood and Elton (1565) disclose the claimed invention except for utilization of a particular cable diameter and conducting area.

Shildneck teaches a flexible cable about 1.25 inches in diameter, or about 30.63 mm (c.4, lines 40-46). From the information given in c.4, lines 40-46, it can be deduced that the conductive area of the strands 6 falls within the claimed range of 80-3000 mm^2. This particular cable thickness and conductive area provides the necessary flexibility to the cable to bend it in a 15-inch radius.

It would have been obvious to one having ordinary skill in the art at the time the invention to have used a conductor having a diameter per Shildneck for the winding of Wood and Elton since this would have provided the necessary flexibility to the cable such that it could be bent and wound in the stator slots. Moreover, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In reAller, 105 USPQ 233.

8. Claim 33 and 35-37 are rejected under 35 U.S.C. j 103(a) as being unpatentable over Wood (UK 1,135,242) and Elton (US 4,853,565) and further in view of Elton et al. (US 4,622,116).

Wood and Elton '565 disclose the claimed invention except for having the semiconducting layers and the insulation the same coefficient of thermal expansion.

Elton '116 teaches in column 7, lines 38-44, that it is known to form different overlapping insulations with the same coefficient of thermal expansion in order to prevent thermal stress which would separate and crack the materials causing failure of the insulation.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to formed the insulation of Wood and Elton '565 such that the different layers of insulation have similar or the same coefficient of thermal expansion as taught by Elton '116 in order to prevent thermal aging and cycling.

Response to Arguments

9. Applicant's arguments filed April 15, 2002 have been fully considered but they are not persuasive. Regarding applicant's argument that Madsen does not teach the method of

mounting a tube into a space using both a hot pressure medium and a cold pressure medium, it is noted that Madsen's pressure tubes 5 are arranged in the space between the coils 4 and the wedges 3 (Fig.7, c.1, lines 59-61). Thereafter, hot pressure medium comprising thermosetting resin 6 is supplied through the feed tubes at a pressure sufficient to expand the space in the tubes by 50% (abstract). The resin in the feed tubes cools and becomes a "cold pressure medium" which causes the tubes to solidify and permanently assume an expanded shape.

Regarding applicant's argument that Wood does not teach a cable but rather rectangular bar-type windings, applicant has not presented any arguments as to what the difference is between a "cable" and a "winding". The examiner takes Wood's windings to include "cables" since there is no evidence provided that cables are necessarily not rectangular. Further, the secondary reference Elton '565 clearly discloses a cable winding (Fig.7).

Regarding Elton '116, applicant argues that it does not teach or disclose the deficiencies of the base references, but does not specifically point out how the language of the claims rejected under Elton '116 patentably distinguishes them from this references. Therefore, this rejection still stands.

Information Disclosure Statement

10. The information disclosure statement (IDS) submitted on October 21, 2002 has been considered by the examiner. It is noted, however, that reference AF to Aosaki et al. has the wrong patent number. The correct number is US 5,293,146. The examiner has made the Aosaki reference of record by listing it on the enclosed PTO-892.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 571-272-2029. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm
6 March 2004